DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 13.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012314
Date Inspected: 01-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Oregon Iron Works Clackamas, Or.

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Clackamas.OR

CWI Name:	Jose Salazar			**CWI Present:**	☑ Yes	☐ No		
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A	
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A	
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A	
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A	

Bridge No: 34-0006
Component: Hinge K

Summary of Items Observed:

On this date, Caltrans Quality Assurance Lead Inspector (QA) Joe Adame was present at Oregon Iron Works, Inc. (OIW) to observe the fabrication of the Hinge K Pipe Beams assemblies and related items. The following observations were documented.

OIW Fabrication Shop-Bay 3
Hinge-K Pipe Beam Assembly 102A-2:
OIW Quality Control (QC) Inspector Jose Salazar informed the QA Inspector that OIW have completed Critical Weld Repairs (CWR) # 023 & #24. OIW had received a verbal approval to proceed with CWR's 022 and 023 on 2/26/10. The repair welding was completed on the evening of 2/26/10. The weld joint designations for the CWR's were listed as #142 & #145. The QA Inspector observed OIW Leadmamn Troy Smith in the process of cleaning weld terminations on stiffener to forging locations. The QA Inspector later observed that QC Inspector Salazar was present to perform Magnetic Particle Testing (MT) on the CWR's. The MT was being performed after 48 hrs cooling period as described in AWS D1.5- 02 Sec.12.16.4(FCP). The QA Inspector observed that the MT was performed per OIW approved procedure, QC-113, Rev. #3. QC Inspector Salazar stated that no rejectable indications were discovered during the testing. OIW Leadman Troy Smith informed the QA Inspector that this assembly would be moved out of the welding manipulator and placed on the lathe for further machining of stiffeners within the next couple of days.

OIW Fabrication Shop-Bay 3
Hinge-K Pipe Beam Assembly 102A-2:
The QA Inspector observed OIW welder Marcus Belgrade (WID #B62) performing submerged arc welding

(SAW) on the a109 Cap plate to a106 HPS 485W stiffener base. The QA Inspector noted that this weld joint was designated as a partial joint penetration (AWS D1.5 TC-P4-S), weld joint #W2-19. Mr. Belgrade was performing the SAW in the flat (1G) position using OIW approved welding procedure specification (WPS 4020). The QA Inspector observed QC Inspector Jose Salazar verifying the in-process welding parameters and pre-heat temperature. The QC Inspector stated the average welding parameters were observed at 598 amps and 35 volts with a pre-heat temperature of 350 degrees Fahrenheit (177 C). The QA Inspector also verified the welding parameters and pre-heat. Items observed appeared to in general compliance with the AWS D1.5 and the applicable WPS (4020).

AG Machine Works (Boring, OR)

The QA Inspector arrived at AG Machine Works to observe the final machining on the Fuse 120A-7. The QA Inspector met with AG Machinist Stuart Doyle. Mr. Doyle explained that he was currently in process on the first final machining cut pass. Mr. Doyle explained that this cut pass is set to remove approximately 5 mm of stainless steel overlay material. Mr. Doyle further stated that AG would possibly complete the first cut on 3/2/10 & go into the third cut by the end of the week. (Per the contract requirements a finished outer diameter of 1920 mm (+/- 1 mm) is required.) The Machinists did not think that final inspection would take place this week. The QA Inspector also noted that this Fuse is the first of the “Spare” fuses to go through the final machining process. Mr. Doyle stated that he was not instructed to machine a bevel prep on the Fuse. The QA Inspector inquired if the ends of the Fuse would be machined /“faced”. Mr. Doyle was unsure but stated that he would inquire with OIW Project Manager Bill Pender. Currently the untrimmed end of this spare Fuse is in the flame cut condition.

Material, Equipment, and Labor Tracking (MELT)

QA Itnspector Joe Adame performed a verification of material, personnel and equipment involved with the project. The QA Inspector accounted for: 3 OIW production personnel and 1 QC Inspectors. AG Machine: 1 Machinists and 1 Supervisor.

(See attached photos)

WELDING INSPECTION REPORT

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Summary of Conversations:

As noted in the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer